ABOUT THIS GUIDE

This guide is to assist you with the set-up and use of your Avalon ID card printer.

The information contained in this guide is subject to change without notice. Ultra Electronics Limited shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance or use of this material.

This document contains proprietary information belonging to Ultra Electronics Limited and may not wholly or partially be copied, stored in a data retrieval system, disclosed to third parties or used for any purpose other than that for which is was supplied, without the express written authority of Ultra Electronics Limited. All rights are reserved.

Magicard® is registered as a trademark with the United States Patent and Trademark Office, Reg. No. 2,197,276.

The HoloKote® feature of Magicard® printers is protected by US PATENT No: 5,990,918 and by EUROPEAN PATENT SPECIFICATION EP 0 817 726 B1.

Microsoft and Windows are trademarks of Microsoft Corporation.

Copyright 2007 Ultra Electronics Limited.

THE QUEEN'S AWARDS FOR ENTERPRISE: INNOVATION 2007

ISO 9001:1992 certified
14001:2006 certified

pending

Avalon QuickStart Guide,
Drawing No. 3623-22-01 Issue 4, May 2007 (Stock No. M9006-648/F)

Ultra ELECTRONICS MAGICARD

Badging Series

Avalon
Avalon Duo

QuickStart Reference Guide

holo Kote — Standard
Full Bleed — Standard
Duplex printing — Avalon Duo only
holo patch — Option
Mag stripe — Avalon 105 only

Avalon
Avalon Duo

QuickStart Reference Guide

QuickStart Guide

1 Unpacking

Avalon Printer

Hopper and Stacker

Power Cable

USB Cable

Driver CD

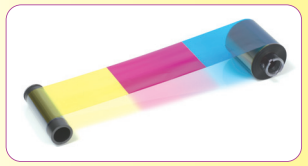
Cleaning Card

2 Consumables

Note: To complete installation and begin using your printer you will also require a roll of suitable Magicard dye-film and cards (not included).

PVC cards

Dye-film



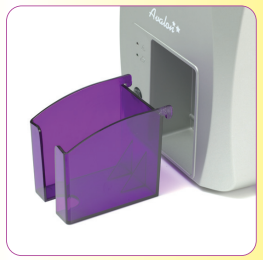
3 Printer location requirements

- Sufficient space for:
  - opening the top cover
  - cable access at the rear.
  - allowance for air circulation.
- An adequately ventilated dust free room.
- Access to a properly grounded power supply.
- Ambient temperature +10 to 30 degrees C.
- Relative humidity 20 - 70%.
- Protection from direct sunlight and chemicals.
- Protection from abrupt temperature changes.

IMPORTANT
Do not connect your printer to the PC before step 10.
Connect printer only after the driver has been installed.

4 Attach the card output stacker

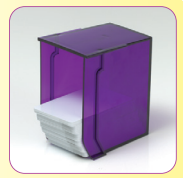
Insert the card collection stacker into the aperture in the front panel and hook into place.
The stacker can hold up to 50, 30mil thick cards, after which it should be emptied. The printer can be operated without the stacker if you wish.



5 Attach the Card Feed Hopper

1. Open a clean pack of cards and make sure they are not sticking together. Load the cards into the feed hopper. Avoid touching the card surfaces because finger marks can effect image quality.

Note: When using magstripe cards, ensure the stripe is on the right and underneath when viewed from the front.



2. Tilt the loaded hopper back as shown, and lower gently into the receptacle at the rear of the printer. You will be able to lower the hopper about an inch (25mm).
3. At this point, tilt the hopper forward to the vertical position and lower all the way down until the hopper is completely within the body of the printer.

6 Prepare the cleaning cassette

Press down on the top cover, operate the top cover release catch and open the cover. First remove the white tape holding the black plastic cleaning cassette. Grip the handle between finger and thumb, then push and release the cleaning cassette. Remove the orange tape and protective layer from the disposable cleaning cassette roller.

Note: This is a good time to familiarise yourself with the way that this automatic cleaning system is designed to operate.

Finally replace the cleaning cassette by inserting the roller shaft into the U shaped guides and clicking into place.

7 Install the dye film

1. Open a new roll of dye film.
2. Place the loaded spool into the rear clips and press it into place. The orientation is correct when the bar code on the end of the spool to the left hand side when viewed from the front. Rotate to make sure that the slot engages with the lug.
3. Place the empty take up spool into the front clips, and adjust the film tension so that the film is lying flat and straight between the two spools.
4. Press the top cover down until it clicks into the closed position. The printer will automatically recognize the type of film that has been loaded.

8 Plug in the printer

Make sure that the printer is turned Off, i.e. the On/Off button is slightly protruding from the front panel.

Caution: Check the label on the rear panel to make sure that the supply requirements of your printer are met by your local AC power supply.

Plug the power supply lead provided into the socket on the rear panel of your printer, and the other end into a properly grounded electrical outlet.

WARNING
Do not connect the USB cable to your PC

9 Print a test card

1. Switch the printer on. You will hear some motor activity and see the indicators flash.
2. When ready, the red Error indicator should be off and the green indicator on.
3. Press and release the small test push button on the rear panel once.
4. After several seconds, the printer will print a test pattern on a card, and feed it to the card output stacker. This indicates that all is well with the printer, i.e. cards loaded, dye film loaded, power is on and lid is closed.

10 Load the CD into your PC

Make sure the printer is switched off. Load the driver CD ROM into the PC you have connected to the printer. If the CD does not run automatically, click the start button, then click on "run". Type "D:\autorun", where D is the drive letter for your CD drive, then press the return key.
Now follow the on screen instructions to install the printer drivers. On completion of installation, you will be able to print cards.

WARNING
Do not connect your printer to the PC before step 10.
Connect printer only after the driver has been installed.

www.magicard.com

Reference Guide

How to clean your printer

We recommend that you clean your printer using a cleaning card each time you replace the dye-film.

To clean the printer feed mechanism :

- Remove the dye film
- Remove the card hopper and open the top door (the red light comes on).
- Take a fresh cleaning card from its packaging.
- Insert the narrow end into the card feed slot.
- Press the black button on the back of the printer (located above the USB connector). The card is drawn into the printer and then ejected. Repeat this several times with both sides of the same card.

- To ensure that the rear feed rollers situated under the card hopper are thoroughly cleaned set the printer to its cleaning cycle, and instead of inserting the card, simply hold it against these rollers. You are provided with 1 cleaning card with the Avalon. You can purchase a Cleaning Kit (Magicard part number M9005-761), which includes 5 cleaning cards and a cleaning pen.

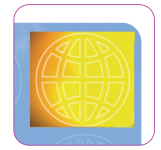
To clean the printhead :

- Using a purpose made cleaning pen (available from your Magicard dealer as part of the Cleaning Kit, Magicard part number M9005-761).
- Open the printer and draw the pen several times, in the same direction, along the complete length of the printhead.

Inside the printer is a cleaning cassette. It is recommended that the disposable cleaning roller is replaced after every 1000 prints. You can buy a pack of 5 cleaning rollers (Magicard part number M9005-772). To see instructions for replacing the cleaning cassette, see section 6 ("Preparing the cleaning cassette") in this guide.
You need to re-use the cassette, but replace the roller within it. The only other maintenance procedure feasible for the user is replacement of the printhead. This should normally only be necessary following damage by dirt, so cards must be kept clean before loading into the printer.

How to set up your Avalon to use HoloPatch® cards

When used with HoloPatch cards, the HoloKote watermark provides provides a defense against card fraud. Cards with this feature are available for both plain and magstripe formats.
To select this feature, ensure that the card design allows space for the HoloPatch cut-out, go to 'Printer Settings' from the start menu on your PC, open the 'Avalon Printer' and Right Click' on it. From the drop down menu select 'PRINTING PREFERENCES' and then 'CARD FRONT'. Set HoloPatch to 'YES' and click OK. Cards will be printed with a 'cookie cutter' hole in the image lining up with the gold patch on the card.



Note: HoloPatch cards should be fed with the gold patch on top, and on the right-hand side (viewed from the front).

How to adjust card thickness

The print engine adjusts automatically to the cards used. However, to prevent misfeeds the card feed preventor should be set using the lever in front of the card hopper which is best accessed by removing the cleaning cassette.
Card thicknesses between 0.51mm to 1.6mm (0.020in to 0.063in) can be accommodated.

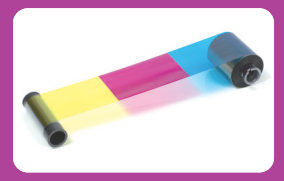
How to use magnetic stripe cards (Avalon 105 and Avalon Duo 105 only)

When loading magnetic stripe cards, make sure that the stripe is on the right and underneath when viewing from the front of the printer.
Use HiCo magnetic stripe cards only (not LoCo).

CONSUMABLES

The Magicard Avalon/Avalon Duo are dye-sublimation printers which transfer dye from a dye film or ribbon onto the surface of a PVC printable card.
For best results, use only Magicard dye film.

Dye film and lamination film available as follows:-



AV1 : 250 shot YMCKO dye film roll - M9006-566

LC1 : 350 shot YMCKO dye film roll - M9005-751

LC3 : 1,000 shot resin black monochrome dye film - M9005-753 (also available in a range of monochrome colors)

LC6 : KO 2 panel dyefilm (black and overcoat) 600 images per roll (Part No. M9005-756).

LC8 : YMCKOK 6 panel dye film 300 images - Avalon Duo only - (Part No. M9005-758).

- Standard CR80 PVC cards (500) - M9006-793
- CR80 HoloPatch cards (500) - M9006-796

Avalon 105 with built-in magstripe encoder

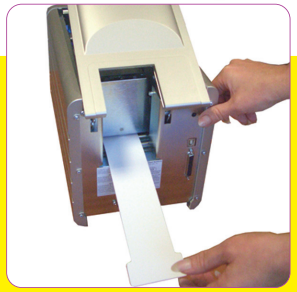
- Standard CR80 HiCo magstripe cards - (500) M9006-794
- CR80 HiCo magstripe Holopatch cards (500) - M9006-797

CLEANING KITS

Avalon

CK1 - Cleaning kit 5 T cards, 1 pen - M9005-761

The Magicard T-Card cleaning system is easy to use. Regular cleaning is essential to keeping your printer in good working condition.



HOLOKOTE® SECURITY

Ultra's patented HoloKote watermark system is a built-in feature of your Magicard printer and cannot be copied or bypassed. HoloKote costs absolutely nothing to use.

Ultra's patented HoloKote watermark system

HOLOPATCH® CARDS

For more visible security, try HoloPatch cards. When you print with HoloPatch cards, one area of the HoloKote security pattern is highlighted by a highly reflective 'super-diffuser' patch, making the logo clearly visible at a distance and under all lighting conditions.

Hi-visibility HoloPatch and HoloKote system combined

How to get service or support

If you have a problem with the installation or operation of your Magicard printer, first please re-check to ensure that you have followed the instructions given in this guide.

Avalon Printer Support

We also recommend that you visit our website **www.magicard.com** where additional FAQs and technical support information are available, and a 'contact us' email form to report any problems.
If you still have a problem you will be covered by our warranty.
Follow the instructions under 'Limited Warranty Information' to obtain assistance.

If you have warranty enquiries or experience a problem, call or fax our service center or visit our web site www.magicard.com

CALL EU +44 (0) 1305 784 738
Ultra Electronics Limited
MAGICARD Service Centre
Waverley House, Hampshire Road, Granby Estate
Weymouth, Dorset, DT4 9XD, UK
Fax: +44 (0) 1305 777 904

CALL US (425) 556 9708
Ultra Electronics Inc.
MAGICARD US Service Center
6711 - 176th Avenue NE
Redmond, WA 98052, USA
Fax: (425) 556 3962

SAFETY INSTRUCTIONS

Please read all of these instructions before using your printer. Observe the markings on the rear panel of the printer.

- To prevent electric shock do not remove covers.
- Do not attempt to service the printer yourself.
- There are no user serviceable parts inside. In the event of malfunction, refer servicing to your nearest Ultra Electronics Service Center.
- Use only a power source within the limits marked on the rear panel label.
- Take care not to spill any liquid on the printer.
- Ensure that the power supply cord is not longer than 6 feet (2 metres) and includes a properly grounded connection.
- If using this printer in Germany:
  To provide adequate short-circuit protection and over-current protection for this printer, the building installation must be protected by a 16 Amp circuit breaker.
  Bei Anschluß des Druckers an die Stromversorgung muß sichergestellt werden, daß die Gebäudeinstallation mit einem 16-AÜberstromschalter abgesichert ist.

Warnings, Cautions and Notes
Throughout this guide and in text on the CD, the following conventions are used to identify important information.

WARNING - Warning messages indicate where personal injury could result from not following the correct procedures.

CAUTION - Caution messages indicate where damage to equipment could result from not following the correct procedures.

NOTE - Notes convey important information that is identified within the text.

When Handling the Printer
Avoid touching the thermal printing edge of the thermal printhead. Grease and contamination will shorten its life.

Before transporting the printer, remove the dye film and card hoppers. Pack the printer in its original packaging.

If you have a problem with the installation or operation of your Magicard printer, please first recheck to ensure that you have followed the instructions given in this guide and on the CD ROM.

We also recommend that you visit our website **www.magicard.com** where additional FAQs and technical support information is available, and a 'contact us' email form to report any problems.

LIMITED WARRANTY INFORMATION

1) Coverage: Ultra Electronics Ltd Warrants that the MAGICARD printer shipped with this Warranty statement will conform to the manufacturers specifications and be free from defects in materials or workmanship for a period of **1 year** from the date of original purchase by the user, but there are additional conditions on the printhead Warranty (see paragraph 2).

2) Limited Printhead Warranty: Ultra warrants that, under normal use and service, thermal printheads will be free from defects in material and workmanship for a period of one year from the date of original purchase or for a quantity of 10,000 printed cards, whichever comes first, provided that Ultra-approved card media is utilised. If a Warranty claim is submitted for a defective printhead, Ultra will have the right to inspect the printhead and samples of the printed and blank ID cards used with it for the purpose of verifying that the claimed defect has not been caused by non- Ultra approved media, or by foreign particles or substances which have caused chemical or physical damage. Ultra's decision in any such claims shall be final.

3) Warranty Claims: If the MAGICARD printer proves defective during this period, please contact the Ultra Service Center, at the address and telephone/fax number given below. The Ultra Service Center personnel may first ask you to carry out certain simple checks to confirm the nature of the problem, and if a return is appropriate they will give you a Return Authorisation Number (MRAN) and consignment instructions to the appropriate repair center. Ultra will, at its option, repair or replace the defective parts at no charge to the customer.

4) Warranty Limitations: The Warranty does not apply to MAGICARD printers that have been:
- Damaged through physical or electrical mishandling.
- Damaged through operation in environments which are outside normal office conditions in terms of corrosive atmosphere, temperature, humidity, shock or vibration.
- Improperly installed or interfaced to other products which may exhibit software problems or expose the MAGICARD to improper voltages or control signals.
- Used with consumables from any source other than Ultra Electronics.
- Serviced or interfered with by anyone other than an Ultra Authorised Service provider.

5) Shipping: Insurance and shipping costs incurred in sending the MAGICARD printer for Warranty service are the responsibility of the customer. Whenever possible Ultra Service Centers will use the same class of shipping service selected and paid for by the customer to return the printer. Return shipping costs from Ultra to the customer will be at Ultra's expense. After obtaining the MRAN as described above, the printer should be securely packed in its original packaging with proof of date of purchase and a note describing the problem and quoting the MRAN. The printer must be sent to the Service Center address supplied with the MRAN by the main service center. This address may be different to the address listed below, but will generally be closer to you. Please also mark the Return Authorisation Number on the outside of the shipping carton. All customs duties and taxes, if applicable, are the responsibility of the customer.

6) Applicability: The Warranty and remedy provided above are exclusive and in lieu of all other warrants, either express or implied, including but not limited to, implied warranties of merchantability and fitness for a particular purpose. Any statements or representations made by any other person or firm are void. Neither Ultra Electronics Ltd nor its affiliates shall be liable for any loss, inconvenience, or damage, including direct, special, incidental, or consequential damages, resulting from the use or inability to use the Ultra product, whether resulting from breach of Warranty or other legal theory even if Ultra has been advised of the possibility of such damage or loss.

This Warranty is governed by the laws of England. Any dispute arising out of or relating to this Warranty shall be submitted for arbitration of this dispute or disputes pursuant to the rules and regulations of the UK Arbitration Act. This Warranty gives you specific legal rights, and you may also have other legal rights which vary from country to country so the above limitations and exclusions may not apply to all customers.

EMC

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications. Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicable aux appareils numériques de la class A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

EU Declaration of Conformity

The EU Directives covered by this Declaration

89/336/EEC	Electromagnetic Compatibility Directive, amended by 92/31/EEC & 93/68/EEC
72/23/EEC	Low Voltage Equipment Directive, amended by 93/68/EEC

The Product Covered by this Declaration

Magicard Avalon Card Printer

The Basis on which Conformity is being Declared

The product identified above complies with the requirements of the above EU Directives by meeting the following standards

BS EN 50 081-1	EMC Generic Emission Standard Part 1
BS EN 50 082-1	EMC Generic Emission Standard Part 1
BS EN 60 950 : 1992	Safety of Information Technology Equipment including Electrical Business Equipment